



Hollywood Bowl Stormwater Quality Improvement and Sustainability Project

Technical Resources Program

Fiscal Year 2023-2024

Central Santa Monica Bay

Project Lead: Mark Ladd

Presenter Names: Laura Connelly, Elaine Nesbit, Mike Rudd

Previously Awarded TRP – No



PROJECT OVERVIEW

Multi-benefit project to improve water quality and sustainability by capturing, treating and/or infiltrating stormwater runoff.

- Primary Objective: water quality improvement
- Secondary Objectives: improved sustainability
- Project Status: Seeking TRP Funding for development of the Feasibility Study (FS)
- Total Funding Requested: \$300,000





SITE LOCATION WITHIN SCWP WATERSHEDS



- Project Location: Hollywood
- Watershed Area: Central Santa Monica Bay
- Capture Area



SITE LOCATION



Hollywood Bowl Future Proposed Vision Plan



PROJECT BACKGROUND – THE BOWL VISION PLAN

- **Why was the Project Location selected?**

As part of Visioning and Sustainability planning process, stormwater quality improvements and reduced site runoff were identified as critical issues that needed to be addressed and would benefit both preserving the natural open space and benefit the broad and diverse communities who frequent the Bowl.
- **How was the Project developed?**

The Los Angeles Philharmonic Association engaged a Landscape Architect, arborist and Sustainability/Civil Design firm to evaluate the Hollywood Bowl park, with over 65 acres of undeveloped native flora and fauna. Based upon extensive research and site investigation, they created a sustainability outline to guide stewardship of this LA County Park. The TRP application came out of those efforts.
- **Which regional water management plan includes the proposed project?**

The project will be proposed to the RWMG and request to be included in their respective plan and database.



BENEFITS TO DISADVANTAGED COMMUNITIES

The Hollywood Bowl, as a performance venue and LA County park is for everyone and reaches a wide range of municipalities and disadvantaged communities in several ways.

DIVERSE PROGRAMMING ATTRACTS A DIVERSE AUDIENCE:

Mariachi USA, the Hollywood Bowl Jazz festival (formerly known as the Playboy Jazz Festival), Korea Times Music festival, genres from classical, jazz, pop, rock, musicals, movie music. These events reach wide and diverse communities, providing a diverse array of performing artists that appeal to the community,

THE BOWL IS AFFORDABLE:

With \$1 tickets available to many concerts, along with the ability to bring your own picnic and drinks – the Bowl provides an affordable way to experience the arts.

THE BOWL IS ACCESSIBLE:

From the Metro station at Hollywood & Highland, along with Bowl shuttles and Bowl Park & Ride bus system – it's easy and inexpensive to get to the Bowl – from Sun Valley to South LA, Northridge to West Covina.

These programs combined result in a wide diversity of attendance at Bowl events – providing a resource to disadvantaged communities that may not otherwise have access to world class productions.



PROJECT BACKGROUND – VISION PLAN GOALS

Vision Plan Goals





Partners

- Who are the implementation partners already identified?
The Los Angeles Philharmonic has invested \$500,000 to the visioning and sustainability effort, along with \$100,000 annual funding for sustainability project. Public and private funding will be determined during the FS process, but it is anticipated that LA Phil will be looking to LA County DPR and FCD to partner on this project.
- What communities or groups have expressed support for the project?
Los Angeles County Department of Parks and Recreation has expressed support for both the Visioning and Sustainability Plan, along with this Measure W application.
- Have you received a letter of concurrence from the municipality and Flood Control District?
We have received a letter of support from Los Angeles County Department of Parks and Recreation
- Have you yet engaged the appropriate vector control district about the project concept?
Not at this time. VC will be engaged during the FS process.



PROJECT BACKGROUND – SUSTAINABILITY GOALS

Sustainability & Resiliency Framework: Goals



Priority Scope - All Projects
Sustainability & Resiliency Framework



PROJECT BACKGROUND – SUSTAINABLE STRATEGIES

Strategies



Water & Drainage

A. Subwatershed Initiatives

- 1 - Natural Areas Subwatershed
- 2 - Lot A Subwatershed
- 3 - Lot B Subwatershed
- 4 - Lot C/D Subwatershed

B. Regional Water Quality: Measure W Potential Projects

C. Recycled Water



Habitat & Ecology

A. Developed Areas Canopy

B. Natural Areas & Demonstration Restoration Sites

- 1 - Bowl Backdrop
- 2 - Bowl Seating Surround



Net Zero Carbon & Energy

A. Lot D Solar

B. Recycling Consolidation

C. Onsite Composting

Priority Scope - All Projects
Sustainability & Resiliency Framework



PROJECT BACKGROUND – SUSTAINABLE STRATEGIES

Water & Drainage Strategies

Stormwater Management



Bioretention Planters & Swales
typ max slope = 4%



Permeable Pavement
typ max slope = 5%



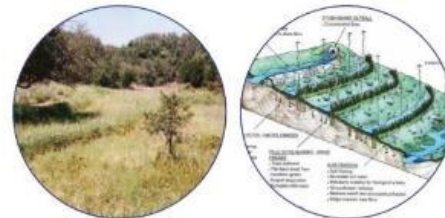
Infiltration Trench & Gallery
typ max slope = 5%



Dry Wells
typ max slope = 15%



Vegetated Filter Strip
typ max slope = 6-33%



Diversion & Infiltration Berms
typ max slope = 5%

Priority Scope - All Projects
Water and Drainage



PROJECT BACKGROUND

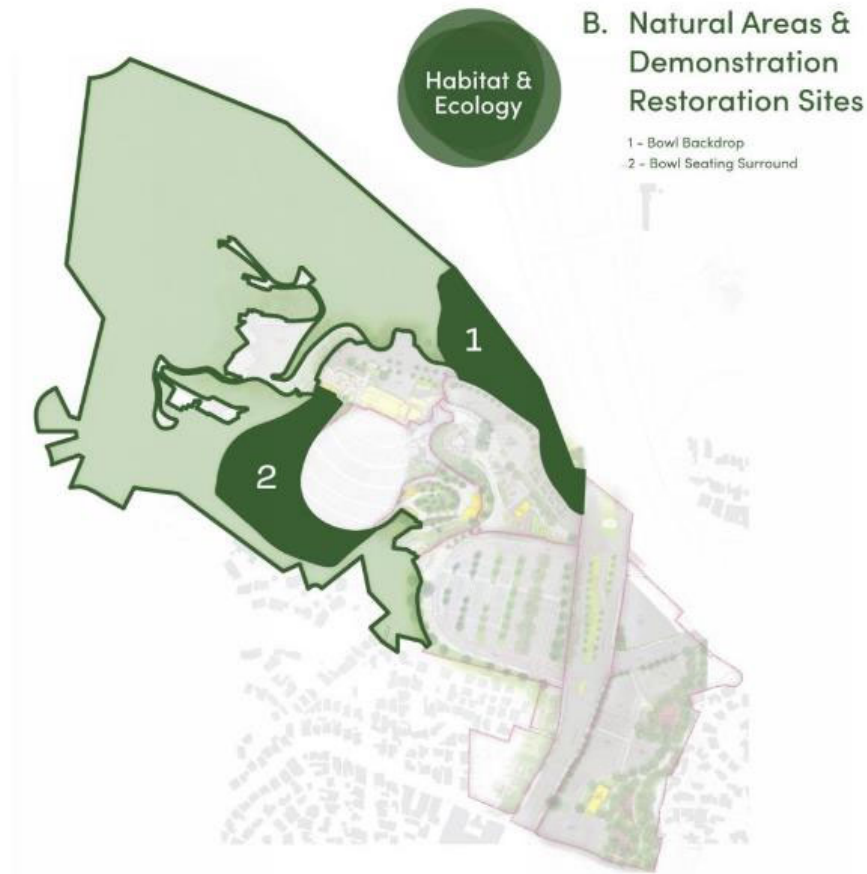
Issues Addressed

- Patron safety
- Longevity / lifespan
- Maintenance need
- Invasives management
- Drought tolerance
- Aesthetics & treatment of landscape voids
- Habitat restoration
- Erosion control / slope stabilization
- Wildfire risk / ladder fuels

Site Strategies

- visible demonstration sites
- fire risk and erosion assessments
- employ erosion management strategies
- refer to 2021 tree inventory
- remove, prune, and maintain individual trees noted with safety, erosion, and fire concerns
- native resilient planting
- establishment irrigation

Priority Scope Areas





Project Location








California Climate Investments Priority Populations 2022 CES 4.0

California Air Resources Board

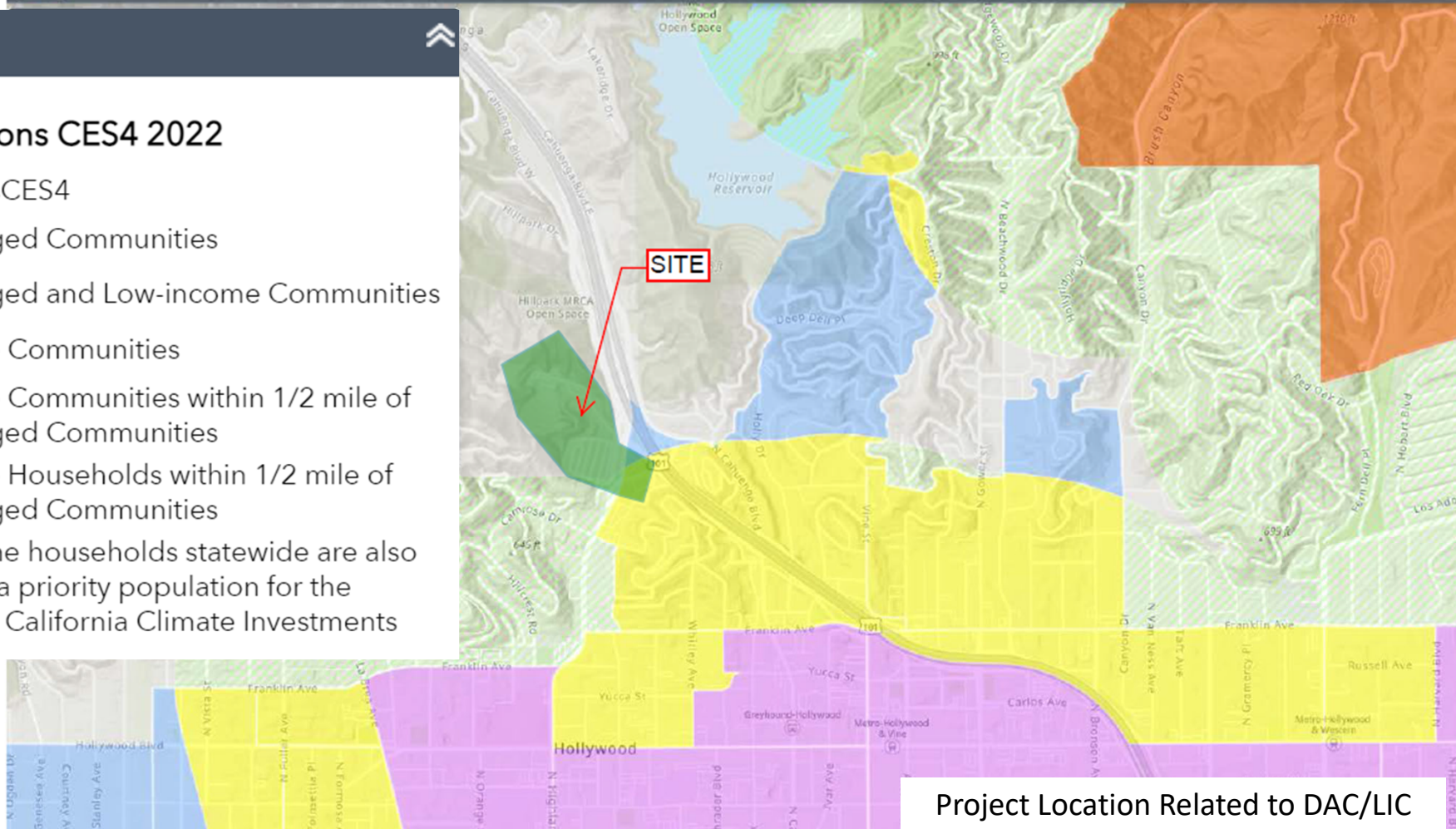
Legend

Priority Populations CES4 2022

PriorityPopulationsCES4

-  Disadvantaged Communities
-  Disadvantaged and Low-income Communities
-  Low-income Communities
-  Low-income Communities within 1/2 mile of Disadvantaged Communities
-  Low-income Households within 1/2 mile of Disadvantaged Communities

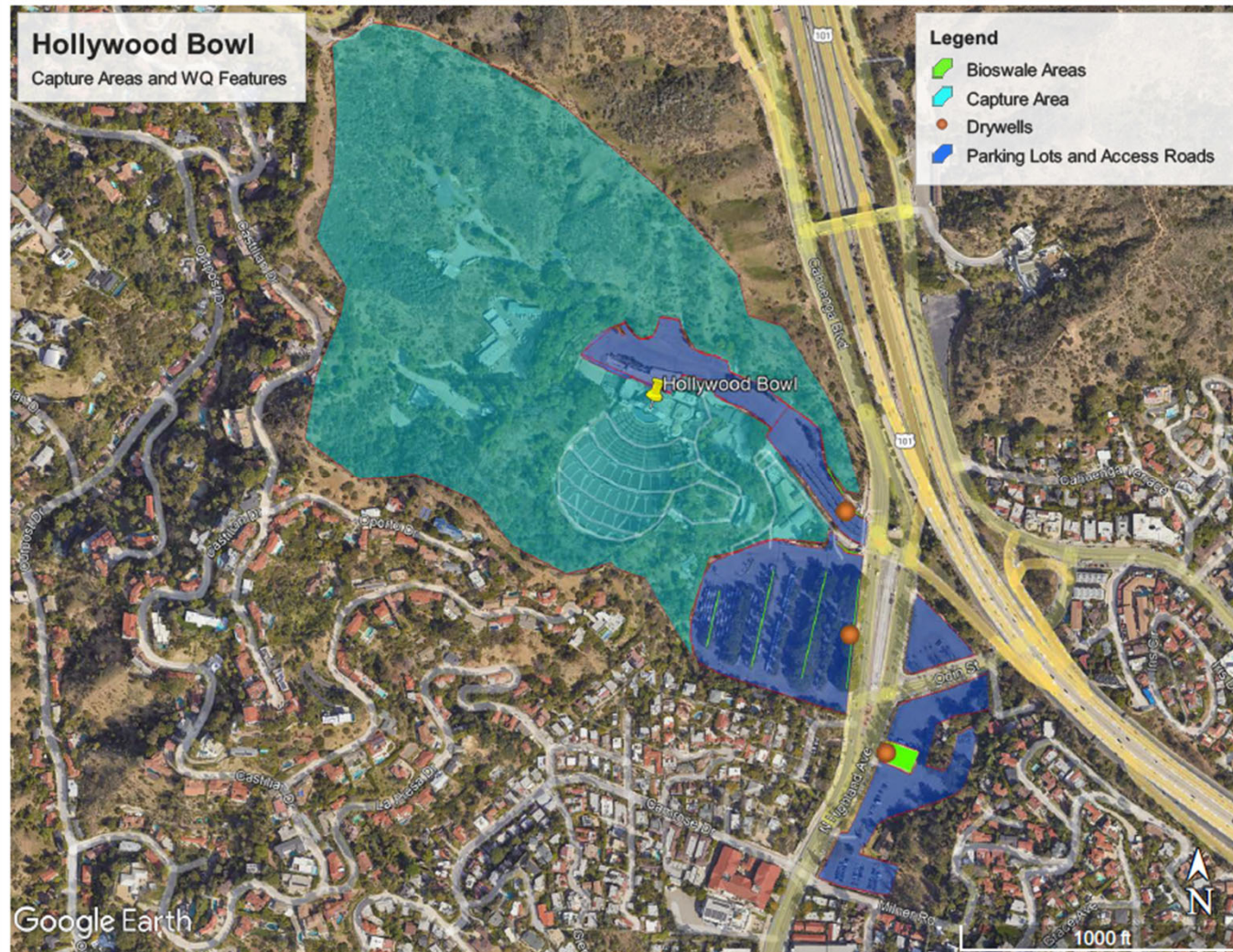
* Low-income households statewide are also considered a priority population for the purposes of California Climate Investments



Project Location Related to DAC/LIC



PROJECT SITE – 68 ACRES UNDEVELOPED/20 DEVELOPED





PROJECT OVERVIEW – FACT SHEET

Hollywood Bowl Stormwater Quality Improvement and Sustainability Project is a multi-benefit project that:

- Improves drainage, optimizes stormwater capture and infiltration, increases vector control and helps protect a cleaner, locally controlled water supply.
- Addresses nuisance flooding and improve stormwater quality by treating 100% of the runoff from the 85th percentile, 24-hour storm event. The project will:
- Protects our coastal waters and beaches from the trash and contaminants in stormwater that make people sick and threaten marine life.
- Modernizes infrastructure, using a combination of nature, science, and new technology.
- Helps protect public health, ensuring safer, greener, healthier, and more livable spaces for all.
- Prepares our region for the effects of a changing climate — including recurring cycles of drought, wildfire, and flooding.

Stormwater improvements to this iconic 100-year-old venue include installation of bioswales and drywells to capture, treat and infiltrate stormwater from onsite sources as well as from adjacent neighborhoods.





STORMWATER QUALITY IMPROVEMENTS

THE PROJECT PROPOSES TO:

- Capture 100% of the 85th Percentile, 24-hr event
- Infiltrate approximately 15 ac-ft of runoff per year
- Plant trees and shrubs
- Achieve ~70 points in Safe Clean Water Program scoring.

Funding request of \$300k for development of a Feasibility Study

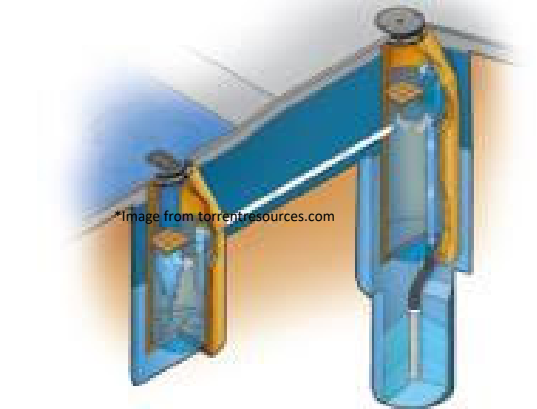
Project Summary



Bioswales



Curb Inlet



Drywell System*



Porous Paving



PROJECT OVERVIEW – CAPTURE AREA LOT B



Capture Areas



PROJECT OVERVIEW – CAPTURE AREA LOTS C & D



Lots C, D and Milner Road



Capture Areas



Preliminary Costs

Hollywood Bowl TRP Project					
Preliminary Cost Estimate					
28 July 2022					
Scheduled Value					
Item #	Item	Quantity	Unit	Unit Price	Total
1	Drywell Systems	7	EA	\$ 100,000	\$ 700,000
2	Storm Drain Pipe	800	LF	\$ 31	\$ 24,800
3	Curb Inlet	6	EA	\$ 6,000	\$ 36,000
4	Bioswales	33,160	SF	\$ 30	\$ 994,800
5	Porous Paving	5,000	SF	\$ 6	\$ 30,000
6	Trees	32	EA	\$ 500	\$ 16,000
7	Landscape	1	LS	\$ 20,000	\$ 20,000
				Construction Total	\$ 1,821,600
				Construction Contingency (20%)	\$ 364,320
				Construction Sub Total	\$ 2,185,920
				Planning Total	\$ 109,296
				Design Total	\$ 327,888
				Construction Management	\$ 218,592
				Grand Total	\$ 2,841,696



Estimate O&M Cost

Monitoring Cost (1 year)		\$ 22,036
Annual Maintenance Costs*	units	annual cost
Hollywood Bowl		\$30,400
<i>Bioswales, Landscaping</i>	number of laborers = 4 labor rate (per hour) = \$100 hours per activity = 8 deployments per year = 4 equivalent days per year = 4	\$12,800
<i>Curb Inlets</i>	number of laborers = 2 labor rate (per hour) = \$100 hours per activity = 4 vactor truck (per day) = \$8,000 deployments per year = 4 equivalent days per year = 2	\$17,600
<i>Porous Paving</i>	number of laborers = 2 labor rate (per hour) = \$100 hours per activity = 8 vactor truck (per day) = \$8,000 deployments per year = 2 equivalent days per year = 2	\$19,200
<i>Drywells (3 pretreatment, 7 infiltration chambers)</i>	number of laborers = 2 labor rate (per hour) = \$100 hours per activity = 8 vactor truck (per day) = \$8,000 deployments per year = 4 equivalent days per year = 4	\$38,400
Annual Maintenance Costs =		\$88,000
Annual Operation Costs		\$8,800



Funding Request

Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	\$300,000	Feasibility Study	Following 2022 Interim Guidance, effort to include evaluation of water quality/supply benefits, nature-based solutions, DAC and community investment benefits, outreach, etc.
2			
3			
4			
5			
TOTAL	\$300,000		



QUESTIONS?

Laura Connelly: General Manager

Mark Ladd: Hollywood Bowl Ops

Elaine Nesbit: Project Manager

Mike Rudd: Civil Engineer

